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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,626	08/25/2003	Steve B. Brown	IL-11024	4354

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EXAMINER

MENON, KRISHNAN S

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,626	BROWN ET AL.	
	Examiner	Art Unit	
	Krishnan S. Menon	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-11 and 13-19 are pending as amended 2/24/06.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 7-~~14~~¹¹, 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kornelsen (US 6,629,820).

Claims 1 and 11: Kornelsen teaches a filter having an inlet, an outlet, a variable flexure-based filter body with variable size passage in between, and piezo-electric stack (21: column 4 lines 53-65) connected to the passage for adjusting the passage opening as claimed. See figures 1-4, column 4 lines 3-15, and column 5 lines 45-57 teaches filter. Kornelsen also teaches the method of filtering in the cited paragraphs. See also column 2 lines 29-41.

Claims 7-10: These claims recite particles size range 1-500 micron, Kornelsen teaches 30-50 micron particles. The particles being beads, having optical label, and surface and antibody/antigen reactions are intended use. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be

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employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)

Claims 16 and 17: particles are beads, with diameter 30-50 microns – see figures and column 5 lines 51-53, and column 6 lines 8-10.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3,4,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kornelsen as applied to claim 1 above, and further in view of Kyser et al (US 4,506,276).

Claims 3 and 13 differ from the teaching of Kornelsen in the recitation of a strain gauge operatively connected to the piezo-electric stack. Kyser teaches a piezo-electric stack with a strain gauge, wherein the strain gauge provides the electrical signal to operate the piezo-electric stack to open and close a valve depending on a sensed pressure condition. See abstract, figure 3, column 6 lines 30-38, and column 5 line 48 – column 6 line 18. With respect to claim 4 and 14, the claims differ from the teaching of Kornelsen in the recitation of the setscrew. See column 7 lines 2-7 of the Kyser reference, wherein a setscrew is used to adjust the position of the piezo-electric stack.

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It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Kyser in the teaching of Kornelsen for automatic operation of the valve/filter on a sensed condition similar to what is taught by Kyser.

3. Claims 5,6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kornelsen as applied to claim 1 or 11 above, and further in view of Wiget (US 4,834,534).

Instant claims differ from the teaching of Kornelsen in the recitation of the sapphire window. Wiget teaches using sapphire for transparent windows 19 and 20 for light transmission in a high performance chromatography flow cell. It would be obvious to one of ordinary skill in the art at the time of invention to use a light transmitting material such as sapphire as taught by Wiget for optical detection/analysis of the beads of the Kornelsen reference.

4. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kornelsen as applied to claim 16 above, and further in view of Gruber et al (US 2003/0066956).

Kornelsen teaches bead loading and unloading, with beads having chemically active surfaces in column 5 line 64 – column 6 line 27. Instant claims differ from the teaching of Kornelsen in the recitation of the beads having optical tags or antigen/antibody reactions. Gruber teaches beads or microspheres having optical tags or antigens loaded on the surface for manipulation by optical traps (see abstract, and

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paragraphs 14, 16-20 and 106). It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Kornelsen in the teaching of Gruber as optical traps for such manipulations.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kornelsen as applied to claim 1 above, and further in view of Gamble et al (US 2002/0045287).

Gamble teaches making flexible diaphragms and teaches (paragraph 5) that the flexural material for diaphragms is usually made of stainless steel, glass or silicon; thus it is known in the art to use stainless steel for the flexural member, and one of ordinary skill in the art would use such known materials.

Response to Arguments

Applicant's arguments filed 2/24/06 have been fully considered but they are not persuasive.

Kornelson reference: the 102 rejection based on this reference identifies each and every element recited in the claims.

Regarding the 103 rejections, applicant's contention is that the combination of the references do not teach all the elements claimed. In response, please see the rejection – every element in every claim is present in at least one of the references in the combination. Motivation to combine is also stated in the rejection.

Conclusion

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan S. Menon
Patent Examiner
3/9/06


JOHN KIM
Primary PATENT EXAMINER